

Appl. No.:09/928,133
Amdt. dated 07/18/2005
Reply to Office action of March 22, 2005

REMARKS

Applicants submit this Response in response to the Office Action mailed March 22, 2005 (the "Office Action"). In this Response, Applicants have amended the specification, amended claims 1, 4, 6, 9, 11, 15, 16 and 19, and added new claims 21-24. No new matter has been added.

In the Office Action, the Examiner objects to the disclosure for failing to include the U.S. Patent application numbers for two of the applications cited in paragraph 1 of the application. Paragraph 1 has now been amended to include the appropriate application numbers and the objection to the specification is therefore overcome. Applicants thus respectfully request that the objection be withdrawn.

In the Office Action, the Examiner has (1) rejected claims 1-20 under 35USC § 102(b) as being anticipated by U.S. Patent No. 5,798,706 to Jeffery A. Kraemer, et al. (the "Kraemer '706 Patent"), (2) rejected claims 1-3, 5-8, 10-13, 15-18 and 20 under 35USC § 102(b) as being anticipated by U.S. Patent No. 6,701,432 to Feng Deng, et al. (the "Deng '432 Patent"), and (3) rejected claims 4, 9, 14 and 19 under 35 U.S.C. § 103(a) as being unpatentable over the Deng '432 Patent in view of the Kraemer '706 Patent. Applicants respectfully request reconsideration of the present application and allowance of the claims based on the following.¹

Independent Claim 1 recites an apparatus for detecting adversarial activity on a network. The apparatus includes

- a memory adapted to store a host table;
- a key exchanger adapted to derive a cipher key
- a translator adapted to translate predetermined portions of packet header information of a data packet according to a cipher algorithm keyed by the cipher key, wherein the predetermined portions include an address;
- a mapping device adapted to map the address to the host table;
- a host resolution device adapted to determine addresses of devices on the network when the address does not match an entry in the host table and to supplement the host table with any additional addresses, wherein said mapping

¹ As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such in the future.

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device is further adapted to again map the address to host table following supplementation; and
an actuator adapted to trigger a security device when the address does not match an entry in the host table.

Neither of the cited references, taken either individually or in combination, teaches or suggests the apparatus of independent Claim 1. In this regard, the Kraemer '706 patent describes a network configuration designed to detect back door communication between a work station on the network and device outside of the network. As an example, this back door communication could be conducted via a modem associated with a work station that connects to a device outside of the network in a manner that is independent of the gateway through which communications with devices outside of the network are intended to flow. According to the Kraemer '706 patent, a packet scanner is connected to the network, such as a local area network, and compares the source and destination addresses of packets transmitted over the network to addresses on two different tables. A first table includes the addresses of the devices on the network, while the second table identifies the hardware addresses of the gateways authorized to be connected to the network. See column 3, line 46-59 of the Kraemer '706 patent.

If the source and destination addresses are not included in the tables, the Kraemer '706 patent describes various event routines being performed, which may include logging of information relating to the destination and source devices, the content of the packet at the time at which the event occurred, and the like. Although the Kraemer '706 patent does describe logging situations in which the source and destination addresses are not included in a table, the Kraemer '706 patent does not teach or suggest "a host resolution device adapted to determine addresses of devices on the network when the address does not match an entry in the host table and to supplement the host table with any additional addresses," as recited by independent Claim 1. Indeed, the Kraemer '706 patent does not teach or suggest that the tables should be updated, revised or otherwise modified in instances in which the source and destination addresses are not included within the tables. As such, the Kraemer '706 patent also fails to teach or suggest "a mapping device adapted to map the address to the host table" and "further adapted to again map the address to host table following supplementation," as also recited by independent Claim 1.

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The Deng '432 patent also fails to teach or suggest the apparatus of independent Claim 1. The Deng '432 patent includes a gateway for screening packets transferred over a network. The gateway is described to include a firewall engine and a memory that are coupled not only by a memory bus, but also by a local bus to thereby facilitate enhanced communication between the firewall engine and the memory. The firewall engine examines incoming packets and, in particular, the address of the incoming packets so as to screen the incoming packets in accordance with one or more rule sets. While the firewall engine of the Deng '432 patent may detect an incoming packet having an address that does not match an anticipated address as defined by a respective rule set and may therefore prevent the packet from entering the network protected by the gateway, the Deng '432 patent does not teach or suggest "a host resolution device adapted to determine addresses of devices on the network when the address does not match an entry in the host table and to supplement the host table with any additional addresses," as recited by independent Claim 1. As such, the Deng '432 patent likewise fails to teach or suggest "a mapping device adapted to map the address to the host table" and "further adapted to again map the address to host table following supplementation," as also recited by independent Claim 1.

Since neither of the cited references teaches or suggests at least a host resolution device as recited by amended independent Claim 1, any combination of these references likewise fails to teach or suggest a host resolution device. Thus, the rejection of amended independent Claim 1 is overcome, and Applicants respectfully request withdrawal of the rejections of Claim 1.

Independent Claim 6 recites a method for detecting adversarial activity on a network that includes

- storing a host table;
- deriving a cipher key;
- translating predetermined portions of packet header information of a data packet according to a cipher algorithm keyed by the cipher key, wherein the predetermined portions include an address;
- mapping the address to the host table;
- determining addresses of devices on the network when the address does not match an entry in the host table and supplementing the host table with any additional addresses prior to repeating the mapping of the address to the host table; and
- triggering a security device when the address does not match an entry in the host table.

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Likewise, independent Claim 11 recites a device for detecting adversarial activity on a network and includes various means for performing the method of Claim 6, and independent Claim 16 recites a bastion host adapted for processing packet header information of the data packet and operable to perform the method of Claim 6.

For similar reasons as described above in conjunction with independent Claim 1, independent Claims 6, 11 and 16 are also not taught or suggested by the Kraemer '706 patent and/or the Deng '432 patent, taken either individually or in combination. Thus, the rejections of amended independent Claims 6, 11 and 16 are also overcome, and Applicants respectfully request that the rejections of Claims 6, 11 and 16 be withdrawn.

Claims 2-5, 7-10, 12-15 and 17-20, which depend from independent Claims 1, 6, 11 and 16, are also patentably distinct from the cited references, taken either individually or in combination, for at least the same reasons as described above in conjunction with their respective base independent claims.² As such, the rejection of the dependent claims is therefore also correspondingly overcome, and Applicants respectfully request that the rejections of claims 2-5, 7-10, 12-15 and 17-20 be withdrawn.

Applicants have added new claims 21-24 which are dependent on Claims 1, 6, 11 and 16, respectively. New dependent Claims 21-24 recite other unique aspects of the claimed invention, also not taught or suggested by the Kraemer '706 patent and/or the Deng '423 patent. Applicants therefore believe claims 21-24 to be patentable over the cited references for at least this additional reason.

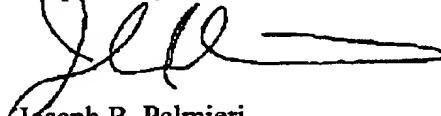
In view of the foregoing, it is respectfully submitted that all of the claims of the present application are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of present application.

² As Applicants' remarks with respect to the base independent claims are sufficient to overcome the Examiner's rejections of all claims dependent therefrom, Applicants' silence as to the Examiner's assertions with respect to dependent claims is not a concession by Applicants to the Examiner's assertions as to these claims, and Applicants reserve the right to analyze and dispute such assertions in the future.

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It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 07-2347.

Respectfully submitted,



Joseph R. Palmieri
Registration No. 40,760

Customer No. 32127
Verizon Corporate Services Group, Inc.
C/O Christian R. Andersen
600 Hiddenridge, HQE03H14
Irvin, Texas 75038
Telephone: (972) 718-4800
Facsimile: (972) 718-3946